Luis HernÃ¡ndez-Callejo

List of Publications by Year
in descending order

97 papers	2,871 citations	279798 23 h-index	189892 50 g-index
99 all docs	99 docs citations	99 times ranked	3083 citing authors

#	Article	IF	Citations
1	A Survey on Electric Power Demand Forecasting: Future Trends in Smart Grids, Microgrids and Smart Buildings. IEEE Communications Surveys and Tutorials, 2014, 16, 1460-1495.	39.4	387
2	A review of photovoltaic systems: Design, operation and maintenance. Solar Energy, 2019, 188, 426-440.	6.1	232
3	A review of strategies for building energy management system: Model predictive control, demand side management, optimization, and fault detect & diagnosis. Journal of Building Engineering, 2021, 33, 101692.	3.4	198
4	A multi-agent system architecture for smart grid management and forecasting of energy demand in virtual power plants. , 2013, 51, 106-113.		172
5	Artificial neural networks for short-term load forecasting in microgrids environment. Energy, 2014, 75, 252-264.	8.8	170
6	A Study of the Relationship between Weather Variables and Electric Power Demand inside a Smart Grid/Smart World Framework. Sensors, 2012, 12, 11571-11591.	3.8	139
7	State of the Art and Trends Review of Smart Metering in Electricity Grids. Applied Sciences (Switzerland), 2016, 6, 68.	2.5	135
8	Development and validation of grey-box models for forecasting the thermal response of occupied buildings. Energy and Buildings, 2016, 117, 199-207.	6.7	124
9	Short-Term Load Forecasting for Microgrids Based on Artificial Neural Networks. Energies, 2013, 6, 1385-1408.	3.1	121
10	Technological review of the instrumentation used in aerial thermographic inspection of photovoltaic plants. Renewable and Sustainable Energy Reviews, 2018, 93, 566-579.	16.4	99
11	Classification and Clustering of Electricity Demand Patterns in Industrial Parks. Energies, 2012, 5, 5215-5228.	3.1	92
12	Artificial Neural Network for Short-Term Load Forecasting in Distribution Systems. Energies, 2014, 7, 1576-1598.	3.1	86
13	State of the Art and Trends in the Monitoring, Detection and Diagnosis of Failures in Electric Induction Motors. Energies, 2017, 10, 1056.	3.1	66
14	Reviewing Microgrids from a Multi-Agent Systems Perspective. Energies, 2014, 7, 3355-3382.	3.1	47
15	Image Resolution Influence in Aerial Thermographic Inspections of Photovoltaic Plants. IEEE Transactions on Industrial Informatics, 2018, 14, 5678-5686.	11.3	46
16	Ensemble network traffic classification: Algorithm comparison and novel ensemble scheme proposal. Computer Networks, 2017, 127, 68-80.	5.1	44
17	Exploratory study on Class Imbalance and solutions for Network Traffic Classification. Neurocomputing, 2019, 343, 100-119.	5.9	36
18	Improved Short-Term Load Forecasting Based on Two-Stage Predictions with Artificial Neural Networks in a Microgrid Environment. Energies, 2013, 6, 4489-4507.	3.1	35

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19	Nondestructive characterization of solar PV cells defects by means of electroluminescence, infrared thermography, Iâ€“V curves and visual tests: Experimental study and comparison. Energy, 2020, 205, 117930.	8.8	34
20	Study of Unwanted Emissions in the CENELEC-A Band Generated by Distributed Energy Resources and Their Influence over Narrow Band Power Line Communications. Energies, 2016, 9, 1007.	3.1	33
21	Low-temperature multiple-effect desalination/organic Rankine cycle system with a novel integration for fresh water and electrical energy production. Desalination, 2020, 477, 114269.	8.2	33
22	Experimental Analysis of the Input Variablesâ€™ Relevance to Forecast Next Dayâ€™s Aggregated Electric Demand Using Neural Networks. Energies, 2013, 6, 2927-2948.	3.1	31
23	Quantitative failure rates and modes analysis in photovoltaic plants. Energy, 2019, 183, 825-836.	8.8	28
24	Techno-Economic Viability of Agro-Photovoltaic Irrigated Arable Lands in the EU-Med Region: A Case-Study in Southwestern Spain. Agronomy, 2021, 11, 593.	3.0	28
25	Performance Study of the Application of Artificial Neural Networks to the Completion and Prediction of Data Retrieved by Underwater Sensors. Sensors, 2012, 12, 1468-1481.	3.8	22
26	Maintenance Models Applied to Wind Turbines. A Comprehensive Overview. Energies, 2019, 12, 225.	3.1	22
27	Techno-economic analysis of hybrid PV/T systems under different climate scenarios and energy tariffs. Solar Energy, 2020, 212, 191-202.	6.1	20
28	A review on measurement techniques for non-intentional emissions above 2 kHz. , 2016, , .		19
29	A Comprehensive Review of Operation and Control, Maintenance and Lifespan Management, Grid Planning and Design, and Metering in Smart Grids. Energies, 2019, 12, 1630.	3.1	18
30	Novel Utility-Scale Photovoltaic Plant Electroluminescence Maintenance Technique by Means of Bidirectional Power Inverter Controller. Applied Sciences (Switzerland), 2020, 10, 3084.	2.5	16
31	Infrared Thermography for the Detection and Characterization of Photovoltaic Defects: Comparison between Illumination and Dark Conditions. Sensors, 2020, 20, 4395.	3.8	15
32	A Review of Energy Consumption Forecasting in Smart Buildings: Methods, Input Variables, Forecasting Horizon and Metrics. Applied Sciences (Switzerland), 2020, 10, 8323.	2.5	14
33	Additive Ensemble Neural Network with Constrained Weighted Quantile Loss for Probabilistic Electric-Load Forecasting. Sensors, 2021, 21, 2979.	3.8	14
34	Harmonic distortion characterization in groups of distribution networks applying the IEEE Standard 519-2014. IEEE Latin America Transactions, 2021, 19, 526-533.	1.6	14
35	Analysis of the Viability of a Photovoltaic Greenhouse with Semi-Transparent Amorphous Silicon (a-Si) Glass. Agronomy, 2021, 11, 1097.	3.0	14
36	Novel Data-Driven Models Applied to Short-Term Electric Load Forecasting. Applied Sciences (Switzerland), 2021, 11, 5708.	2.5	14

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37	Analysis and characterization of PV module defects by thermographic inspection. Revista Facultad De IngenierÃa, 2019, , 92-104.	0.5	13
38	Simulation of a Solar-Assisted Air-Conditioning System Applied to a Remote School. Applied Sciences (Switzerland), 2019, 9, 3398.	2.5	12
39	Low-Cost Electronics for Online I-V Tracing at Photovoltaic Module Level: Development of Two Strategies and Comparison between Them. Electronics (Switzerland), 2021, 10, 671.	3.1	12
40	A Data-Driven Forecasting Strategy to Predict Continuous Hourly Energy Demand in Smart Buildings. Applied Sciences (Switzerland), 2021, 11, 7886.	2.5	12
41	A Review of Iâ€“V Tracers for Photovoltaic Modules: Topologies and Challenges. Electronics (Switzerland), 2021, 10, 1283.	3.1	11
42	Short Term Load Forecasting of Industrial Electricity Using Machine Learning. Communications in Computer and Information Science, 2020, , 146-161.	0.5	10
43	Virtual weather stations for meteorological data estimations. Neural Computing and Applications, 2020, 32, 12801-12812.	5.6	10
44	Microgrid Field Trials in Sweden: Expanding the Electric Infrastructure in the Village of Simris. IEEE Electrification Magazine, 2018, 6, 48-62.	1.8	9
45	Structural performance of steel angle shear connectors with different orientation. Case Studies in Construction Materials, 2021, 14, e00523.	1.7	9
46	Electricity demand forecasting in industrial and residential facilities using ensemble machine learning. Revista Facultad De IngenierÃa, 0, , .	0.5	9
47	Smart management of a distributed generation microgrid through PLC PRIME technology. , 2015, , .		8
48	Diagnosis of wind turbine faults using generator current signature analysis: a review. Journal of Quality in Maintenance Engineering, 2019, 26, 431-458.	1.7	8
49	AnÃ¡lisis de la Resistencia a Corte de Conectores Tipo Ãngulo en Losas de HormigÃ³n Armado sobre Estructura MetÃ¡lica. Revista Tecnica De La Facultad De Ingenieria Universidad Del Zulia, 2022, 45, 36-47.	0.1	8
50	Fault Detection of Wind Turbine Induction Generators through Current Signals and Various Signal Processing Techniques. Applied Sciences (Switzerland), 2020, 10, 7389.	2.5	7
51	Conversion of a Network Section with Loads, Storage Systems and Renewable Generation Sources into a Smart Microgrid. Applied Sciences (Switzerland), 2021, 11, 5012.	2.5	7
52	Analysis of the Integration of Drift Detection Methods in Learning Algorithms for Electrical Consumption Forecasting in Smart Buildings. Sustainability, 2022, 14, 5857.	3.2	7
53	Online Distributed Measurement of Dark I-V Curves in Photovoltaic Plants. Applied Sciences (Switzerland), 2021, 11, 1924.	2.5	6
54	Evaluation of Artificial Intelligence-Based Models for Classifying Defective Photovoltaic Cells. Applied Sciences (Switzerland), 2021, 11, 4226.	2.5	6

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55	Optimal energy management strategies to reduce diesel consumption for a hybrid off-grid system. Revista Facultad De IngenierÃa, 0, , .	0.5	6
56	Study of a Hybrid Solar Absorption-Cooling and Flash-Desalination System. Energies, 2020, 13, 3943.	3.1	5
57	DIR-FCEV powered by different fuels â€“ Part I: Well-to-wheel analysis for the Brazilian and Spanish contexts. International Journal of Hydrogen Energy, 2022, 47, 17069-17081.	7.1	5
58	Low-Cost Three-Quadrant Single Solar Cell I-V Tracer. Applied Sciences (Switzerland), 2022, 12, 6623.	2.5	5
59	Segmentation of Thermography Image of Solar Cells and Panels. Communications in Computer and Information Science, 2020, , 1-8.	0.5	4
60	CITIES: Ibero-American Research Network for Sustainable, Efficient, and Integrated Smart Cities. Smart Cities, 2020, 3, 758-766.	9.4	4
61	Detecting Hot Spots in Photovoltaic Panels Using Low-Cost Thermal Cameras. Communications in Computer and Information Science, 2020, , 38-53.	0.5	4
62	Aerial Thermographic Inspection of Photovoltaic Plants: Analysis and Selection of the Equipment. , 2017, , .		4
63	Energy-ecological efficiency of the fuel cell electric vehicle powered by different biofuels. Clean Technologies and Environmental Policy, 2022, 24, 1389-1402.	4.1	4
64	Potential for Thermal Water Desalination Using Microgrid and Solar Thermal Field Energy Surpluses in an Isolated Community. Communications in Computer and Information Science, 2020, , 162-175.	0.5	3
65	Diagnosis of Broken Bars in Wind Turbine Squirrel Cage Induction Generator: Approach Based on Current Signal and Generative Adversarial Networks. Applied Sciences (Switzerland), 2021, 11, 6942.	2.5	3
66	Method of monitoring and detection of failures in PV system based on machine learning. Revista Facultad De IngenierÃa, 2021, , 26-43.	0.5	3
67	SIMULACIÃ“N DE MICRORED EN CORRIENTE CONTINUA Y ESTUDIO DE GESTIÃ“N DE POTENCIA Y DE CARGA/DESCARGA DE BATERÃAS. Dyna (Spain), 2017, 92, 673-679.	0.2	3
68	WIND TURBINE MAINTENANCE. A REVIEW. Dyna (Spain), 2018, 93, 435-441.	0.2	3
69	Photovoltaics and Electrification in Agriculture. Agronomy, 2022, 12, 44.	3.0	3
70	Integration of renewable energies in the urban environment of the city of Soria (Spain). , 2022, 1, 100016.		3
71	Wind Resource Assessment on PunÃ¡ Island. Applied Sciences (Switzerland), 2019, 9, 2923.	2.5	2
72	Analysis and Characterization of Thermographic Defects at the PV Module Level. Communications in Computer and Information Science, 2019, , 80-93.	0.5	2

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73	Demand Response Control in Electric Water Heaters: Evaluation of Impact on Thermal Comfort. Communications in Computer and Information Science, 2021, , 74-89.	0.5	2
74	Study of the Influence of DC-DC Optimizers on PV-Energy Generation. Communications in Computer and Information Science, 2019, , 1-17.	0.5	2
75	Low-cost infrared thermography in aid of photovoltaic panels degradation research. Revista Facultad De IngenierÃa, 0, , .	0.5	2
76	IPN Sustainability Program: Solar Photovoltaic Electricity Generation and Consumption Reduction. Communications in Computer and Information Science, 2020, , 109-120.	0.5	2
77	The Impact of Transmission Technologies on the Evolution of the Electrical Grid. Communications in Computer and Information Science, 2019, , 94-101.	0.5	1
78	Degradation analysis of 5-year field exposed photovoltaic modules using low-cost thermography, electroluminescence and I-V curve tests in Ecuador. , 2020, , .		1
79	Small wind turbines study and integration in a peri-urban microgrid. Revista Facultad De IngenierÃa, 0, , .	0.5	1
80	A Methodology for the Conversion of a Network Section with Generation Sources, Storage and Loads into an Electrical Microgrid Based on Raspberry Pi and Home Assistant. Communications in Computer and Information Science, 2021, , 246-258.	0.5	1
81	A comprehensive review of the impact of transmission technologies on the electrical grid. Revista Facultad De IngenierÃa, 2019, , 82-91.	0.5	1
82	Analysis of the influence of DC optimizers on photovoltaic production. Revista Facultad De IngenierÃa, 2019, , 43-55.	0.5	1
83	Experimental investigation of an alternative wind energy generator, particularly designed. Revista Facultad De IngenierÃa, 0, , .	0.5	1
84	Spline adjustment for modelling solar intermittences. Revista Facultad De IngenierÃa, 2019, , 77-86.	0.5	1
85	Monthly Characterization of the Generation of Photovoltaic Arrays. Microgrid Case CEDER, Soria, Spain. Communications in Computer and Information Science, 2020, , 185-198.	0.5	1
86	Methodology for Inspection of Defects in Photovoltaic Plants by Drone and Electroluminescence. Communications in Computer and Information Science, 2022, , 3-14.	0.5	1
87	Energy-ecological efficiency of dual-fuel series plug-in hybrid electric vehicle considering WTW emissions. Environmental Science and Pollution Research, 0, , .	5.3	1
88	SOFCEV: Conventional LCC reduction and NPV based on savings in fixed carbon by sugarcane. Revista Facultad De IngenierÃa, 0, , .	0.5	0
89	Electric power management in a microgrid analyzing photovoltaic arrays and a turbine-generator system. Revista Facultad De IngenierÃa, 0, , .	0.5	0
90	Failure Rate Determination and Failure Mode, Effect and Criticality Analysis (FMECA) Based on Historical Data for Photovoltaic Plants. , 2017, , .		0

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91	COMPARATIVE ANALYSIS OF FAULTS FROM STALL CONTROLLED WIND TURBINES WITH ASYNCHRONOUS GENERATORS AND PITCH CONTROLLED WIND TURBINES WITH SYNCHRONOUS GENERATORS. Dyna (Spain), 2018, 93, 541-548.	0.2	0
92	A New Model for Short-Term Load Forecasting in an Industrial Park. Communications in Computer and Information Science, 2019, , 29-37.	0.5	0
93	Determination of photovoltaic power by modeling solar radiation with Gamma distribution in the CEDER microgrid. Revista Facultad De IngenierÃa, 2020, , 32-43.	0.5	0
94	General Purpose I-V Tester Developed to Measure a Wide Range of Photovoltaic Systems. Communications in Computer and Information Science, 2020, , 135-145.	0.5	0
95	Electric Microgrid in Smart Cities: CEDER-CIEMAT a Case Study. Communications in Computer and Information Science, 2020, , 176-184.	0.5	0
96	Photovoltaic Cells Defects Classification by Means of Artificial Intelligence and Electroluminescence Images. Communications in Computer and Information Science, 2022, , 31-41.	0.5	0
97	Charge Management of Electric Vehicles from Undesired Dynamics in Solar Photovoltaic Generation. Applied Sciences (Switzerland), 2022, 12, 6246.	2.5	0